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BROMUS INERMIS.

Bromus inermis, most commonly called brome-grass, sometimes smooth brome or Hungarian brome, is a vigorous perennial, possessing aggressive underground rootstocks by which it propagates quite readily. In general it grows from 18 to 36 inches high, but under favorable conditions it attains the height of 4 feet or more. Although the grass is inclined to mat at the base, it produces quite an abundance of leaves all the way up the stem. The seed is borne in an open panicle, resembling quite closely the well-known cheat, and is produced abundantly.

Brome-grass was introduced into this country from Europe about 1880 and has attained considerable importance in North Dakota, South Dakota, and in the Pacific Northwest. It is grown to some extent from Kansas north to the boundary and west to the Pacific coast. It is not grown to any extent throughout the timothy region. Brome-grass is capable of withstanding extended periods of drought to a remarkable degree, also severe cold, but it is seriously affected by heat and consequently can not be grown successfully south of latitude 38° except at high altitudes or under otherwise favorable conditions. *Bromus inermis* does well on a variety of soils, but gives best results on soil well supplied with humus. It will, however, do well on sandy and gravelly land.

Use and value.—*Bromus inermis* is a valuable grass, both for hay and pasture, but is of the most importance for the latter. It stands grazing and trampling well and affords pasture early in the spring and late in the fall. On account of its rootstock habit it can be used to better advantage for pasture on sandy soil than most cultivated grasses. It can also be grazed closely by sheep without serious injury. It is very palatable and is relished by all kinds of stock. It makes good hay and yields well for two or three years, after which time the meadow appears to become sod bound, and the yield rapidly decreases unless the field is given some treatment. The hay is of rather a chaffy character and is not so valuable for horses as is timothy. It is a good feed for cattle and is said by ranchmen to be excellent feed for sheep. Yields average from 1 to 4 tons per acre. During the life of the meadow the comparative range of yields when no treatment is given is about as follows: The year following seeding, a rather light yield; second year, maximum; third year, considerable decrease; and fourth year, light. After this it is usually pastured. The best time to cut the hay seems to be when in full bloom, although it can be cut later than this, and even after the seed is mature, and still be palatable and of good quality. Sheep men frequently allow the grass to reach this stage before cutting, as it is thought to make better feed for sheep than if cut earlier.

Brome-grass possesses excellent seed habits, yielding on an average about 225 pounds per acre of highly germinable seed, which weighs 14 pounds per bushel. The seed may be harvested either with a binder or header, the former being most commonly used. If cut with a binder, it is shocked and thrashed in the same manner as ordinary grain, care being taken in thrashing to regulate the wind in order to prevent blowing the seed over. When a header is used the heads are put in well-built shocks to cure, which usually takes from a week to ten days. After the grass is headed the stubble makes a good quality of hay. For this reason heading is preferable to cutting with the binder, since the stubble when cut for hay makes better feed than the straw after the grass is cut with the binder and thrasher.

In North Dakota, South Dakota, and the Pacific Northwest, where this grass is most commonly grown, it is sometimes difficult to eradicate. Those who are following the best methods of farming usually have little difficulty with it in this respect. It forms a very tough sod which is quite hard to plow up, and it often takes a year before it can be made thoroughly free from the grass and in good condition for other crops. For this reason it does not fit as well into a rotation as do many other grasses. In some sections where it is grown the soil is of such a nature as to become very loose after it has been farmed for a few years. Brome-grass is an excellent crop to put humus into this kind of soil and to get it back into good condition.

Culture.—Where brome-grass is now extensively grown the best results are usually obtained from spring seeding, either with or without a nurse crop. A nurse crop is most commonly sown with the grass, and may be either oats, spelt, or barley. In preparing the seed bed the ground may be plowed either in the autumn or in the early spring and well settled by harrowing or disking. Seed is sown either broadcast or with a press drill at the rate of about a bushel to the acre and covered lightly. Rarely more than a bushel of seed is used where the grass is commonly grown, although in sections where it is not thoroughly established 25 to 30 pounds are recommended.

When sown in the spring little may be expected of it the first year. After the grain is cut, if the conditions are favorable it may afford a small amount of pasture, but it is usually best to allow it to remain ungrazed until the following season.

The life of a brome-grass meadow not rejuvenated in any way is about four years. After this it appears to become very badly sod bound, and the yield is very materially decreased. A thorough disking early in the spring when the field is in this condition seems to be very effective in increasing the yield, and a good top-dressing with barnyard manure also gives excellent results. In the Canadian Northwest it is quite a common practice to plow the sod-bound fields shallow in the spring. This method is very effective in bringing the meadow back to a state of high productiveness.

The best method for breaking up a meadow is to plow after a crop of hay has been removed, which is during the month of July, and backset early in the fall or late the next spring, and sow to whatever crop is desired. Heavy yields following brome-grass are almost invariably obtained.

R. A. OAKLEY,
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